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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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May 2, 2005

Mr. David Einan
Hanford Project Office
United States Environmental Protection Agency
309 Bradley Blvd., Suite 115, MSIN: B1-46
Richland, Washington 99352

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Mr. Larry Gadbois
Hanford Project Office
United States Environmental Protection Agency
309 Bradley Blvd., Suite 115, MSIN: B1-46
Richland, Washington 99352

Dear Mr. Einan and Mr. Gadbois:

Re: Coordination for Hanford 300 Area

The Washington State Department of Ecology (Ecology) is working to renew the Hanford Site-Wide Dangerous Waste Permit, # WA7890008967. The permit will include unit-specific, post-closure conditions for the 300 Area Process Trenches (300 APT).

We have identified some technical and regulatory issues, described below, while preparing the draft permit chapter for the 300 APT. In addressing these technical and regulatory issues, we want to follow the lead regulatory agency concept contained in Section 5.6 of the Hanford Federal Facility Agreement and Consent Order (HFFACO) "...to minimize duplication of effort and maximize productivity." Section 5.6 states that the "EPA will generally be the lead regulatory agency when the operable unit, TSD group/unit or milestones involves: Operable units that contain no TSD units or that contain low-priority TSD units." Accordingly, the United States Environmental Protection Agency (EPA) is the designated lead regulatory agency for the 300 Area operable units. Section 5.6 of the HFFACO also states that "EPA and Ecology retain their respective legal authorities."

Section 5.5 of the HFFACO includes the agreement "...that past-practice authority may provide the most efficient means for addressing mixed-waste groundwater contamination plumes originating from a combination of TSD and past-practice units." Ecology and EPA have followed that agreement in their previous responses to the groundwater contamination at the 300-FF-5 groundwater operable unit.

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To continue that cooperation, we request that EPA use three regulatory actions, scheduled for the next three years, to address groundwater contamination associated with the 300 APT and to address and/or support resolution of the attached technical and regulatory issues associated with the 300 APT:

- review the construction close-out report for the 300-FF-1 operable unit (in progress),
- review the Work Plan for Phase III Feasibility Study for the 300-FF-5 groundwater operable unit (due May 2007), and
- completion of the Five-Year Review of Records of Decision (RODs) for the 300-FF-1 and 300-FF-5 operable units (due in calendar year 2006).

Technical and Regulatory Issues

1. A 12-inch ductile iron/potable water line broke under the concrete floor of the 338 extension building on January 24, 2005, and released approximately 300,000 gallons of water to the land surface. This occurrence, which was not reported to the EPA, represents a potential mechanism for leaching uranium from the vadose zone into the groundwater. We request that the Five-Year ROD review consider this mechanism when evaluating whether the soil cleanup levels in the 300-FF-1 ROD are protective of groundwater. We also expect that EPA will be monitoring the 300-FF-1 remedial action over the next couple of years, to determine if the remedy is "operational and functional." We suggest that the operation of the remedy should include appropriate institutional controls to prevent future releases of water to the ground surface, and to require reporting of significant water releases.
2. We reviewed groundwater monitoring data in support of renewing the 300 APT permit. Our review identified the persistence of elevated uranium concentrations at monitoring wells 399-1-17A and 399-3-10. These wells coincide with the south end of the 316-5 Process Trench and the 307 Trenches (316-3), south of the South Process Pond. The 307 Trenches have been an area of high uranium concentration since at least 1995. We conclude that the adequacy of source and inventory characterization at these locations should be considered in the pending regulatory actions named above. We also note that infiltration rates are a key parameter in the conceptual site model for estimating leaching of contaminants to groundwater. Therefore, we suggest that EPA should consider the need to test surface infiltration rates through the 300-FF-1 backfill (current conditions). The infiltration test results could be used to evaluate the protectiveness of the remedial action in the event that water is applied or released to the ground surface.
3. Washington Administrative Code (WAC) 173-160-381 is an applicable regulation for the Comprehensive Environmental Response, Compensation and Liability Act remedial actions. Ecology understands (based on anecdotal accounts) that there may be wells in the 300 Area that are "...unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard."

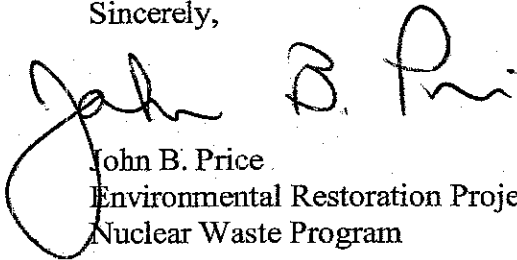
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The presence of such wells could potentially affect both the groundwater flow and contaminant concentrations in the 300-FF-5 operable unit. Therefore, the potential affects of unused and/or unusable wells on groundwater quality should be evaluated in support of the 300-FF-5 Focused Feasibility Study. Also, decommissioning those wells should be identified as an action item in the Five-Year ROD review, and United States Department of Energy should be required to provide a schedule for the priority decommissioning of such wells.

4. It is apparent that seasonal river stage fluctuations impact groundwater flow direction. This should be part of the conceptual site model and should be modeled as part of the 300-FF-5 focused feasibility study.

If you have any questions, please contact me at (509) 372-7921, or Dib Goswami at (509) 372-7902. The lead permit writer for the 300 APT is Jean Vanni, who can be reached at (509) 372-7930.

Sincerely,



John B. Price
Environmental Restoration Project Manager
Nuclear Waste Program

JP:jc

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Administrative Record: 300-FF-1, 300-FF-5, 300 APT
Environmental Portal